

## ABSTRACT

The present invention relates to the electrochemistry of conjugated polymers in ionic liquids and the development and fabrication of long-lived, highly stable conjugated polymer electrochemical devices by using ionic liquids as electrolytes. More specially, the invention relates to the use of ionic liquids as electrolytes for the fabrication of long-lived, highly stable electrochemical actuators, electrochemical capacitors and electrochemical batteries having conjugated polymers as active electrodes as well as for the fabrication of long-lived, highly stable electrochromic devices with polyaniline and polythiophene as coloration materials.